DETAILED ACTION

1. During a telephonic interview with applicant's representative, the Examiner suggested the incorporation of claim 10 to claim 1 in order to expedite prosecution, however, applicant's representative indicated that the inventor would prefer to receive an office action before making any amendment to the claim.

2. The indicated allowability of claims 1-31 is withdrawn in view of the newly discovered reference(s) to Treitinger et al. (US Patent 4,338,281) or Anouchi (US Patent 4,447,397). Rejections based on the newly cited reference(s) follow.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. Claims 1, 2-9, 18-21, 25-26, 35-36 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Treitinger et al. (US Patent 4,338,281) or Anouchi (US Patent 4,447,397).

Treitinger discloses a thin film semiconductor gas sensor including a metal oxide semiconductor sensor layer whose electrical resistance changes in dependence upon the nature and concentration of a gas being detected and having a heating element integrated therewith (see abstract). Treitinger further discloses two spaced-apart metal contact strips 7 and 8 are vaporized on the sensor layer 6 as shown. Connection wires 9 and 10 are joined to the heating layer 3 via contact strips 4 and 5 and connection wires 11 and 12 are joined to the sensor layer 6 via contact strips 7 and 8. Connection wires 9 and 10 feed a current from a suitable source (not shown) to layer 3 for heating

the same and wires 11 and 12 are connected to a resistance sensor (not shown) for determining any changes in electrical resistance in layer 6 upon the presence of a given gas in air. Preferably, the connection wires 9, 10, 11 and 12 have a diameter of about 25 to 100 .mu.m and can be composed of a metal selected from the group consisting of platinum, gold, aluminum and **nickel.** Treitinger discloses the heating contacts 16 and 17 are coupled to wires 24 and 25 for feeding a current to doped zone 15 so as to heat the same and sensor contacts 20 and 21 are coupled to wires 22 and 23 for monitoring a resistance of layer 19. Furthermore, referring now to the embodiment illustrated at FIG. 1, a semiconductor body 1, preferably composed of monocrystalline silicon and having a thickness of about 0.38 to 1 mm, is provided with an insulating SiO.sub.2 layer 2 on all sides thereof, except side 1a, i.e., the underside in the illustrated arrangement. The insulating layer 2 has a thickness of at least equal to about 0.1 and not greater than about 1.0 .mu.m. (col. 3, lines 15-23).

Regarding claims 2-6 and18-21, 35-36, Treitinger discloses thin film gas sensors of the type earlier described are improved by forming the sensor carrier from a semiconductor body which has a shell zone located relatively close to an outer surface of such body (i.e., on or near an outer surface thereof) and which is highly doped, up to the point of degeneration, and which is provided with two spaced-apart metal contact strips for connection to a current source (i.e., for heating connection). Treitinger discloses In a thin film gas sensor as defined in claim 1 wherein said shell zone has a thickness in the range of about 10 to 50 .mu.m.(col. 5, lines 5-7).

Regarding claims 27-29, Treitinger does not disclose a support structure. Rico discloses wherein the filaments are supported at each end by pillars extending upwardly from the substrate, (col. 6, lines 61-65). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Treitinger the support of Rico because the pillars provide conductive pathways between the filaments and the means to resistively heat the filaments to make the above combinative more effective.

Allowable Subject Matter

5. Claims 10-17, 22-24, 30-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 32, 37-38, 40 and 46are allowable in view of the prior art of record.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J M. SAINT SURIN whose telephone number is (571)272-2206. The examiner can normally be reached on Mondays to Fridays between 9:30 A.M and 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron L. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacques M SAINT SURIN/
Primary Examiner, Art Unit 2856